

Appl. No. 09/821,230  
Amdt. Dated September 3, 2003  
Reply to Office Action of June 3, 2003

**• • R E M A R K S / A R G U M E N T S • •**

The Official Action of June 3, 2003 has been thoroughly studied. Accordingly, the following remarks are believed to be sufficient to place the application into condition for allowance.

Claims 1 and 2 are pending in this application.

Claims 1 and 2 stand rejected under 35 U.S.C. §103(a) as being unpatentable over International Publication No. WO 94/14607 to Boich et al. in view of European Patent Application No. 1 066 957 to Koybayashi et al.

For the reasons set forth below, it is submitted that each of the pending claims are patentable over the prior art relied upon by the Examiner and therefore, the outstanding rejection of the claims should properly be withdrawn.

Favorable reconsideration by the Examiner is earnestly solicited.

The Examiner has relied upon Boich et al. as describing a multi-layer surface panel which corresponds to the claimed composite sheet.

The Examiner states that Boich et al.:

...describes at least one elastic layer of a uniform film or foil which corresponds to the claimed elastically stretchable layer with upper and lower surfaces...

and

Appl. No. 09/821,230  
Amdt. Dated September 3, 2003  
Reply to Office Action of June 3, 2003

...at least one inelastic fiber or filament layer joined at spaced points which corresponds to the claimed invention which are joined or bonded together intermittently.

The Examiner has relied upon Kobayashi et al. as describing:

...the upper and lower layer of a composite sheet may be bonded orthogonally, (page 2, lines 54-58; page 3, lines 1-3, lines 40-41), even though non-preferred.

The Examiner does not state how Boich et al. and Kobayashi et al. are to be combined; however, it can be presumed that the Examiner envisions modifying Boich to have the orthogonal bonding direction of Kobayashi et al.

The Examiner states that Boich "differs from the claimed invention because it is silent about the tensile strength of the elastic layer to the inelastic layer."

Nevertheless, the Examiner takes the position that:

It would have been obvious....to optimize the ratio of the tensile strengths in the first direction to the second direction motivated with the expectation that this would improve softness since tensile strength is the ability of a fiber, yarn or fabric to resist breaking under strain.

The Examiner cites *In re Aller*, 105 USPQ 233 as holding that "discovering an optimum value involves only routine skill in this art."

Applicants' independent claim 1 requires, in part, that the inelastically stretchable continuous fibers of the inelastically stretchable fibrous layer are "oriented substantially in said one direction."

This particular orientation of the inelastically stretchable continuous fibers allows applicants' invention to have the claimed tensile strength ratio  $S_1/S_2$  of 3.0 or higher, where  $S_1$  is the tensile

Appl. No. 09/821,230  
Amdt. Dated September 3, 2003  
Reply to Office Action of June 3, 2003

strength of the composite sheet is the first direction and  $S_2$  is the tensile strength of the composite sheet in the second direction.

Moreover, particular orientation of the inelastically stretchable continuous fibers produces a stretch efficiency of 60% or higher.

"In contrast....the composite sheet of prior art in which the continuous fibers 6 are distributed at random presents a stretch efficiency  $S_E$  of less than 60 %." (See the sentence bridging pages 9 and 10 of applicants' specification.)

Boich et al. does not teach that the fibers of the inelastic fiber or filament layer are "oriented substantially in said one direction" as required by applicants' claimed invention.

This failure of Boich et al. is significant because it means that Boich et al. in combination with Kobayashi et al. does not render obvious all the limitations required by applicants' independent claim 1.

In addition, because Boich et al. fails to teach the structural orientation of applicants' claimed inelastically stretchable continuous fibers, Boich et al. likewise fails to teach or render obvious the tensile strength, tensile strength ratio, and stretch efficiency claimed by applicants.

Moreover, it is pointed out that the fact that Boich et al. is silent about tensile strength ratio of the elastic layer to the inelastic layer (as conceded by the Examiner), is because Boich et al. completely fails to appreciate or recognize any criticality associated with tensile strength ratio or stretch efficiency and therefore makes no structural provisions for controlling these properties.

Appl. No. 09/821,230  
Amdt. Dated September 3, 2003  
Reply to Office Action of June 3, 2003

Absent teaching or even mentioning orientation of the inelastic fibers or tensile strength ratio (note Boich et al. does not even mention tensile at all), the teachings of Boich et al. are comparable to the prior art referred to in the sentence bridging pages 9 and 10 of applicants' specification over which applicants' invention clearly distinguishes both structurally and functionally.

The lack of discussing tensile strengths or teaching tensile strength ratio's or stretch efficiency by Boich et al or Kobayashi et al. moots the Examiner's position that it would have been obvious to "optimize the ratio of the tensile strengths in the first direction to the second direction."

*In re Aller*, 105 USPQ 233 was cited by the Examiner as holding that discovering optimum value for ranges involves only routine skill in the art.

*In re Aller* the patent claim on appeal was found to encompass a prior art process for treating isopropyl benzene hydroperoxide with sulphuric acid wherein the hydroperoxide is decomposed into phenol and acetone.

The court found that "[t]he process of appellants is identical with that of the prior art, except that applicants' claims specify lower temperatures and higher sulphuric acid concentrations than are shown in the reference."

The court considered arguments submitted by appellants regarding unexpected results which could not be discovered by one skilled in the art.

The court held that appellants' claimed process was merely different in degree and not in kind from the reference process so that criticality of the claimed ranges was not shown.

Appl. No. 09/821,230  
Amdt. Dated September 3, 2003  
Reply to Office Action of June 3, 2003

The facts and holding of *In re Aller*, are not at all applicable to the present situation in which the prior art is not at all concerned with tensile strength ratios or stretch efficiencies. (Note the criticality reviewed by the court in *Aller* involved reaction yields, reactants and products).

In the present case there is no teaching, suggestion or reference to controlling the alignment of the fibers of the inelastic later in the prior art to achieve a particular tensile ratio or stretch efficiency.

Accordingly, the differences between the prior art and the present invention do not involve a marginal degree as in the case of *In re Aller*.

Therefore, the Examiner cannot rely upon *In re Aller* as supporting the conclusion that "It would have been obvious....to optimize the ratio of the tensile strengths in the first direction to the second direction."

The prior art simple does not teach or suggest the optimization, any benefit or motivation for the optimization, or applicants' particular manner for effecting the tensile strength.

The Examiner states that the motivation for optimizing the ratio of the tensile strength is to "improve softness since tensile strength is the ability of a fiber, yarn or fabric to resist breaking under strain."

This motivation is only conjecture and not supported by a prior art teaching. Moreover, this position overlooks the fact that the tensile ratio can be effected by with decreasing the tensile strength in one layer or increasing the tensile strength in the other layer, so that changing the tensile ratio could conceivable decrease or increase softness.

Appl. No. 09/821,230  
Amtd. Dated September 3, 2003  
Reply to Office Action of June 3, 2003

Note Boich et al teaches that very thin long fibers could be used in higher volumes to increase softness. It would seem that this increase in volume would increase tensile strength (which increases softness per Boich et al.), because more fibers are provided. Such an approach as taught by Boich et al. seems to contradict the Examiner's position that tensile strength or the ability to break fibers is inversely related to softness.

It as not been established on the record that optimizing the ratio of tensile strength in the prior art would improve softness.

As indicated by Boich and the Examiner, tensile strength can be affected by the thickness or thinness of the fibers used to form the inelastic layer or by increasing or decreasing the number or volume of fibers.

The prior art does not teach orienting the fibers of the inelastic layer in a particular orientation to effect the tensile ratio, or otherwise orienting the fibers of the inelastic layer in any manner to achieve any result whatsoever.

Moreover, it is not apparent at all from the prior art or otherwise conceivable how softness can be beneficially improved by optimizing the ratio strength in different orthogonal directions as purported to be obvious to the Examiner.

Note the Examiner's statement concerning discovering "workable" ranges ignores the discussion of the court in *In re Aller* review of criticality, improvements and unexpected results.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is

Appl. No. 09/821,230  
Amdt. Dated September 3, 2003  
Reply to Office Action of June 3, 2003

respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §103 to establish a *prima facie* case of obviousness of applicants' claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejection of the claims should hence be withdrawn.

Therefore, reconsideration and withdrawal of the outstanding rejection of the claims and an early allowance of the claims is believed to be in order.

It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

The prior art cited but not relied upon by the Examiner on page 4 of the Official Action has been noted. This prior art is not deemed to be particularly relevant to applicant's claimed invention.

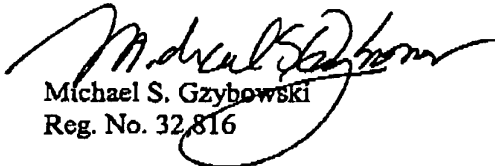
If upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved; the Examiner is invited to contact applicants' patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of

Appl. No. 09/821,230  
Amdt. Dated September 3, 2003  
Reply to Office Action of June 3, 2003

time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,



Michael S. Gzybowski  
Reg. No. 32,816

BUTZEL LONG  
350 South Main Street  
Suite 300  
Ann Arbor, Michigan 48104  
(734) 995-3110

100090.1

OFFICIAL

RECEIVED  
CENTRAL FAX CENTER  
SEP 04 2003